

MAN_02 - Main reasons for temperature excursion of Covid-19 vaccines in 2021

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Introduction: The Ministry of Health of Brazil (MoH) started the National Vaccination Campaign against Covid-19 on January 18, 2021, using the vaccine Covid-19 inactivated (Sinovac/Butantan) and vaccine covid-19 (recombinant) (AstraZeneca/Fiocruz). Subsequently, the Campaign's portfolio was expanded with the introduction of vaccine Covid-19 (RNAm) (Pfizer) and vaccine Covid-19 (recombinant) (Janssen). Vaccines are thermolabile products and, for the most part, have temperature for storage between 2°C and 8°C, except for Janssen vaccines (-25°C and -15°C) and Comirnaty (-25°C and -15°C and -90°C and -60°C) which need to be stored at frozen and deep-frozen temperatures.

Objectives: Analyze and identify, per geographic regions, the main reasons that caused, during the National Vaccination Campaign against Covid-19, losses of Covid-19 vaccines distributed by the MoH in 2021.

Methodology: The quantitative and qualitative analysis was based from the Research Electronic Data Capture platform (REDCap - MS) available data by Federated Units of the five regions of the country from January to December 2021.

Results: During the National Vaccination Campaign against Covid-19, 1,063,574 doses of covid-19 vaccines suffered temperature excursion with the following reasons: cold room failure; refrigerator failure; generator failure, transportation failure; energy failure; improper procedure; among other reasons. In the Southeast region, power failure was the reason for the most temperature excursions (211,717 doses); which also affected the Northern region (10,691 doses); in the Midwest region, failure in the cold chamber (9,965 doses) was most mentioned; the southern region had its reason related to generator failure (86,853 doses); and in the Northeast region, other motives (38,284 doses) predominated.

Conclusion: Considering that the Cold Chain, in their various instances, is responsible for the proper logistics, handling, and conservation of immunobiological and also for avoiding potential losses of these vaccines, ensuring quality maintenance for a safe and effective immunization of users, some measures are necessary to avoid temperature excursion. Preventive and corrective maintenance for the equipment's, continuous monitoring program with the appropriate equipment, such as a calibrated thermometers and thermostats, air-conditioned transportation and strong program for monitoring the vaccines storage and transportation conditions.

Keywords: Temperature excursion, Covid-19 vaccine, Cold chain